

### **REMARKS**

The Office Action mailed May 24, 2007, has been received and the Examiner's comments carefully reviewed. Claims 1-19 remain pending, and have not been amended. No new matter has been added, and favorable reconsideration of this application is requested in view of the following remarks.

#### ***Claim Rejections - 35 USC § 102***

In the Office Action, claims 7-13 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Choy et al. (U.S. Patent No. 5,487,120). Applicant respectfully traverses this rejection.

Applicant notes that claim 7 requires, among other elements, that “each electrical to electrical card include[s] electrical to electrical conversion circuitry for converting between native protocol media signals and common format signals.” Applicant asserts that Choy et al. fails to disclose or suggest at least this aspect of the claims.

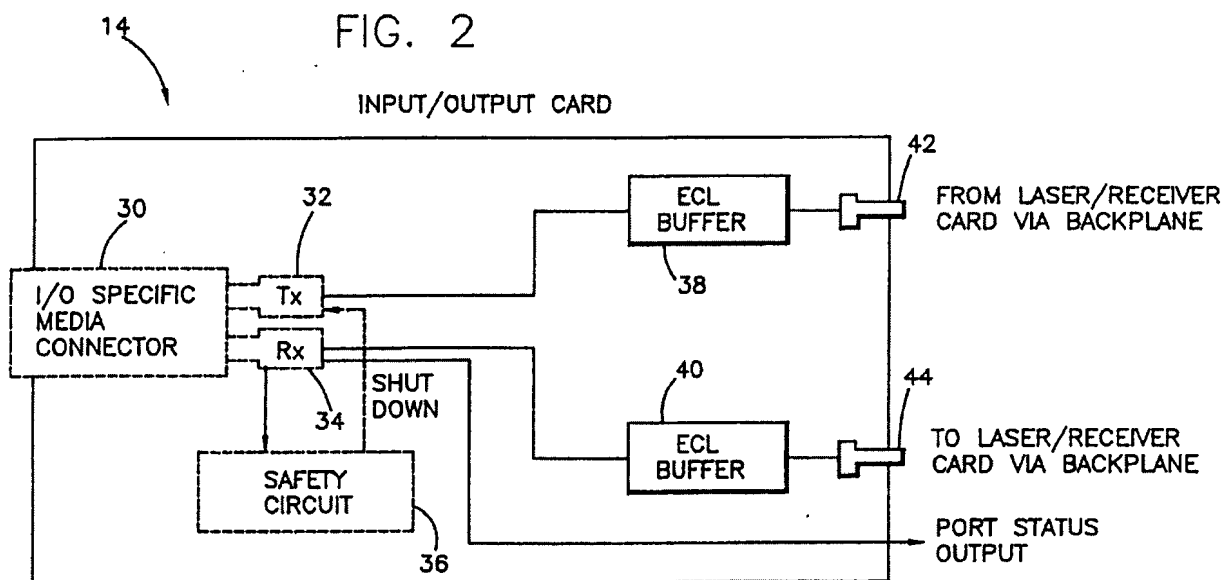
The present application describes and specifically claims an electrical conversion process in which electrical signals of a first format are converted to electrical signals of a second format. Changing the electrical to electrical card in the present application changes the format of the electrical signals that the card expects to receive from external to the claimed system. See p. 9, lines 2-4. Using the invention claimed, one electrical card at a transmitting end could convert an electrical signal from a first format or protocol to the common format, which would then be optically transmitted; then once returned to an electrical signal at a receiving end, a second card could convert the signal from the common format to a second format different from the first format. An illustrative conversion that could occur in the claimed system may be as follows:

1. Electrical to Electrical Conversion (First Format to Common Format)
2. Electrical to Optical Conversion (Common Format to Optical)
3. Optical Transmission

4. Optical to Electrical Conversion (Optical to Common Format)
5. Electrical to Electrical Conversion (Common Format to either First Format or a different format)

It is clear that, in the system as claimed, dependencies between near and far end signal conversion cards are thus only based on optical compatibility, and not communication protocol.

Applicant notes that Choy et al. fails to disclose conversion circuitry on an electrical to electrical card to convert between native protocol media signals and common format signals. Choy et al. discloses an electrical to optical conversion but does not disclose converting electrical signals to a standardized, or “common” format signal for optical transmission. Choy et al. discloses a media connector 30 interfaced with a transmitter 32 and a receiver 34. As stated in Choy et al., “The components 30, 32, and 34 are constructed and operated in accordance with the specific data stream type that is input to and output from the associated channel of the WDM 12.” These features are shown in Figure 2 of Choy et al, which illustrates the hardware-specific connectors of Choy et al.:



Changing the electrical card in Choy et al. will change the hardware interface to the electrical card of that disclosure, but will not change the protocol transmitted into the card to a common format. This is because there is no conversion circuitry in the electrical card of Choy et al.

Rather, the same electrical transmission protocol is allowed by both the electrical and optical systems (*see* Choy et al., col. 7:13-35); therefore, the same electrical transmission protocol must be used at both ends of the optical transmission system. If Choy et al. used a common format for optical transmission as claimed in the present application, it would not be necessary for “The user [to] ensure that the two IOCs 14a and 14b are the same type” because the interim common format used for optical signal transmission would allow conversion at each end to a different protocol.

For at least the above reason, Applicant asserts that Choy et al. does not anticipate independent claim 7. Applicant respectfully requests reconsideration and withdrawal of the rejection of this claim. Similarly, claims 8-13 depend from independent claim 7. Each of these claims therefore inherit the corresponding limitations of that claim and are not anticipated by Choy et al. for at least this reason as well. Applicant therefore respectfully requests reconsideration and withdrawal of the rejection of these claims as well.

#### ***Claim Rejections - 35 USC § 103***

In the Office Action, claims 1, 3-14 and 16-19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Choy et al. (U.S. Patent No. 5,487,120) in view of Sekiguchi et al. (U.S. Patent No. 6,814,546). Claim 2 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Choy et al. in view of Sekiguchi et al., and further in view of Ramaswami et al. (U.S. Patent No. 6,571,030). Applicant respectfully traverses these rejections.

Applicant notes that independent claim 1 recites that “each WDM includ[es] a plurality of separate electrical to electrical converters, each mated with one of the optical to electrical converters at a card edge connector, each electrical to electrical converter including input and output signal locations.” Claim 14 as currently presented recites that “each WDM includ[es] a plurality of separate main signal to electrical converter cards received by each chassis, each main signal to electrical converter card mated with one of the optical to electrical converter cards at a card edge connector, each main signal to electrical converter card including a main signal port.” Applicant asserts that the combination of Choy et al. and Sekiguchi et al. fails to disclose or suggest such an element of either claim.

The combination of Choy et al. and Sekiguchi et al. fails to disclose or suggest electrical converter cards that receive and convert electrical signals to other electrical signals. As discussed above in connection with claim 7, Choy et al. discloses a connector card having electrical connectors, but does not disclose electrical to electrical conversion of signals. Sekiguchi et al. also fails to disclose electrical to electrical signal conversion. Sekiguchi et al. is related to a multifan control apparatus, and is unrelated to electrical signal conversion. In fact, the Examiner uses Sekiguchi et al. to disclose a card edge connector, which is not the element Applicant asserts is absent in the present response. While Applicant presently asserts no view on the comments of the Examiner or the contents of the reference with respect to the element alleged to be present, Applicant does assert that it does not establish, in combination with Choy et al., a *prima facie* case of obviousness of either of claims 1 or 14, which require electrical to electrical conversion.

For at least the above reason, Applicant asserts that Choy et al. does not anticipate independent claims 1 and 14. Applicant respectfully requests reconsideration and withdrawal of the rejection of these claims. Similarly, claims 3-6 depend from independent claim 1 and claim 15 depends from independent claim 14. Each of these claims therefore inherit the corresponding limitations of those independent claims and are not rendered obvious by the combination of Choy et al. and Sekiguchi et al. for at least this reason as well. Applicant therefore respectfully requests reconsideration and withdrawal of the rejection of these claims as well.

With respect to claim 16, Applicant notes that the claim includes the limitation “wherein the electrical to electrical converter card transmits and receives native protocol media signals in a first format, and converts the signals to a second electrical format, wherein the signals of the second electrical format are converted to optical signals at the distinct wavelength of light of the selected optical to electrical converter card.” Applicant asserts that this limitation is not taught or suggested by the combination of Choy et al. and Sekiguchi et al.

The combination of Choy et al. and Sekiguchi et al. fails to disclose or suggest electrical conversion from a first format to a second format as required by claim 16. First, Choy et al. fails to disclose or suggest an electrical conversion from a first format to a second format. Choy et al. merely discloses an electrical connector specific to a protocol which is used to receive electrical

signals for optical conversion, as described above in conjunction with claim 7. Sekiguchi et al. also fails to disclose or suggest electrical conversion on an electrical converter card as well, as discussed in *conne*. Sekiguchi et al. is related to a multifan control apparatus, and is unrelated to protocol conversion. As discussed above, while Applicant presently asserts no view on the comments of the Examiner or the contents of the reference with respect to the element alleged to be present, Applicant does assert that it does not establish, in combination with Choy et al., a *prima facie* case of obviousness of claim 16.

Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 16 for at least the above reason. Claims 17-19 depend from independent claim 16 and inherit the corresponding limitations of that claim. These claims are therefore not rendered obvious by the combination of Choy et al. and Sekiguchi et al. for at least this same reason; Applicant therefore respectfully requests reconsideration and withdrawal of the rejection of these claims as well.

With respect to Claim 2, Applicant notes that the claim requires “splitter circuitry, wherein the optical link includes dual optical links, wherein two transmit and two receive signal pathways are provided.” Applicant asserts that this claim is allowable at least due to its dependence upon claim 1, as explained above, as well as the reasons recited in the response mailed on March 5, 2007.

#### ***Claim 15***

Applicant notes that, although not explicitly stated in the Office Action, claim 15 appears to also be rejected under 35 U.S.C. § 103 as obvious over Choy et al. in view of Sekiguchi et al. (Office Action at 11.) Applicant respectfully notes that claim 15 depends from independent claim 14, and therefore is not rendered obvious by the asserted combination of prior art for at least the reason above, as well as the reasons recited in the response mailed on March 5, 2007. Applicant therefore respectfully requests reconsideration and withdrawal of the rejection of this claim as well.

**Conclusion**

It is respectfully submitted that each of the presently pending claims is in condition for allowance and notification to that effect is requested. Although certain arguments regarding patentability are set forth herein, there may be other arguments and reasons why the claimed invention is patentably distinct. Applicant reserves the right to raise these arguments in the future. The Examiner is invited to contact Applicant's representative at the below-listed telephone number if it is believed that the prosecution of this application may be assisted thereby.

Respectfully submitted,

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Dated: August 31, 2007

A handwritten signature in black ink, appearing to read "Steve Bruess", written over a horizontal line.

Steven C. Bruess  
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SBruess/AJL/dc